

23 June 1955

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MEMORANDUM FOR: Chief, Projects Control Staff, ORR

FROM

SUBJECT

CIA Report RR PR-113, entitled Unification of

the Chemical Industry in the Soviet Bloc

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PROVISIONAL INTELLIGENCE REPORT

UNIFICATION OF THE CHEMICAL INDUSTRY IN THE SOVIET BLOC



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PROVISIONAL INTELLIGENCE REPORT

UNIFICATION OF THE CHEMICAL INDUSTRY
IN THE SOVIET BLOC

CIA/RR PR-113

(ORR Project 22.457)

NOTICE

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S F C D F M

FOREWORD

This report is concerned primarily with the unification of the chemical industries of the USSR and the European Satellites. Hence the term <u>Soviet Bloc</u>, as used in the title and the text of the report, includes only those countries. The term <u>Satellites</u> refers only to the European Satellites. At the present time, Communist China and North Korea are peripheral areas as far as industrial unification is concerned, and there is occasional reference to them.

The term unification as used within this report refers to the transfer of the responsibility for economic policy decisions from the individual countries of the Soviet Bloc to central planning and control groups governing economic activity within the Bloc as a whole. This process is studied specifically in terms of the chemical industry. The prediction of future economic events, a major task of economic intelligence, depends largely upon analysis of decision making. This report seeks the major source or sources for economic decisions in the chemical industries of the Soviet Bloc.

The detailed research on trade and individual organizations was concluded on 1 October 1954. To insure the validity of the conclusions of the report, however, coverage of material relative to the procedures and trends of unification continued until 1 March 1955.

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UNIFICATION OF THE CHEMICAL INDUSTRY IN THE SOVIET BLOC*

Summary and Conclusions

By the end of 1954 the Soviet government had established an industrial policy designed to make the resource planning** for the chemical industry of the entire Soviet Bloc responsive to basic guidance from Moscow. Implicit within the policy is the clear intent that this centralization is to increase in scope and efficiency.

Because of differences in economic and political environment, each country within the Bloc approaches the instrumentation of this policy in a different way. East Germany, Czechoslovakia, and Poland, which have relatively advanced chemical industries, currently ship to the USSR the greatest quantities of highly processed chemicals. East Germany is a particularly important source of the chemicals needed throughout the Bloc. Hungary, Rumania, and Bulgaria, which have relatively retarded chemical industries, are more or less dependent upon other Bloc countries, although Hungary has a highly developed pharmaceutical industry and Rumania has an important petrochemical industry. Communist China does not have a highly developed chemical industry.

Moves to bring about more efficient utilization of resources jointly by the chemical industries of East Germany, Czechoslovakia, and Poland assume particular importance; these three countries account for 87 percent of the total production of chemicals of the European Satellites and Communist China. In the past, coordination of the production of chemicals of these countries has been embryonic, and policy has been determined largely by national aspirations. The

^{*} The estimates and conclusions contained in this report represent the best judgment of ORR as of 1 March 1955 (except as noted in the Foreword).

^{**} Resource planning is used here in the sense of planned direction of the use of capital, labor, and raw materials, with concomitant direction of production and allocation.

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combined production of the chemical industries of the European Satellites and Communist China is equal to about 40 percent of the total production of chemicals of the Soviet Bloc.

Each of the European Satellites has existing or potential lines of chemical specialization contributing to the economy of the Soviet Bloc. All of them, in turn, depend largely upon the USSR and upon each other for needed raw materials, and they supply to each other necessary products as determined by the specialties of the producing country and by relative supply and demand within the Bloc.

Soviet policy concerning the chemical industries of the European Satellites has evolved through two historic phases and is moving into a third. Immediately after World War II the USSR entered the first phase, in which it adopted a policy of ruthless exploitation including extraction of reparations, dismantling of plants, and establishment of Soviet-owned corporations and Soviet-Satellite joint companies. All of these devices weakened the economies of the European Satellites. This was a short-term policy which had to be modified in response to changing conditions.

The second and current phase is a transitional one, an admixture of exploitation and rudimentary policy integration. Although full observance of individual national sovereignties is claimed, the general outlines of industrial policy are based largely on Soviet domination of the Bloc economy. Under present long-term plans the European Satellites are emphasizing a buildup of their productive capacities in basic commodities (including basic chemicals), assisted by long-term credits extended by the USSR. By interlinking long-term trade agreements the European Satellites are beginning to be mutually self-supporting and are decreasing the drain on the resources of the USSR.

The third phase, integration, is being approached by current policy. Increasingly, there is (1) consideration of the Soviet Bloc as an economic whole in matters of economic policy, (2) encouragement of product specialization within the Bloc -- regardless of national boundaries -- toward the goal of maximum satisfaction of scheduled requirements considered from a Bloc-wide point of view, and (3) the establishment of Bloc-wide production and distribution planning. This policy, if successfully implemented in the chemical industry and in other major industries, will mean the eventual economic assimilation of the European Satellites -- and, possibly, Communist China -- by the USSR.

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The following conclusions apply to the relationship between the USSR and the chemical industries of the European Satellites and, to a much lesser degree, that of Communist China:

- 1. Basic industrial policy is centrally determined under Soviet control.
- a. The USSR controls the trade of the European Satellites by the Council of Economic Mutual Assistance (CEMA) and by its own trading companies.
- b. The USSR controls industrial expansion through control of the sources of capital equipment in the Soviet Bloc and through control of the industrial planning within the Bloc.
- c. The USSR controls the domestic economic policy of the European Satellites by means of the Party mechanism, the extension of credit, the State Planning Commissions, and CEMA.
- 2. The Soviet organizations concerned are so many and function in such diverse fashions that there would be virtual anarchy unless there were some central coordinating and planning group. It is assumed that there is such a group. Major organizations involved include the Ministry of Foreign Trade, the production ministries, the foreign trade companies, the Main Administration for Soviet Property Abroad (GUSIMZ), the Soviet-dominated CEMA, Soviet industrial planning institutes, and probably Gosplan.
- 3. The existing mechanism is cumbersome and probably relatively inefficient, even if coordinated within the USSR.
- 4. The mechanism for controlling the execution of centrally decided policy is relatively primitive. No formalized, comprehensive system of sending production reports to Moscow is known to exist, although such reports may occur on a selective basis.
- 5. There is a distinct trend toward increased integration. There are open announcements concerning a higher degree of coordination for the 1956-60 Five Year Plans of the European Satellites and the USSR. Moves toward the adoption of common industrial specifications represent a comparatively high degree of industrial unification.

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- 6. The response to centrally determined policy will depend largely upon the commodities involved and the degree of central control of the particular product. It seems doubtful that central planning could exist as yet for the production and distribution of thousands of commodities within the entire Soviet Bloc, although this could be done for a limited number of selected items. General decisions could be made on a central basis, however, and the details of execution could be left to the participating countries.
- 7. At present the USSR would probably have moderate success in including the European Satellites in any general industrial mobilization. By 1960, after completion of the first coordinated Five Year Plan (assuming that the plan is successful administratively), the USSR may be able to accomplish a Bloc-wide industrial mobilization in a relatively short period.
- 8. The process of integration is a tedious one, still in the early stages of growth and susceptible to interruption by Free World propaganda.
- 9. Assimilation of the Chinese Communist chemical industry is in the very early stage, although increasing Soviet control is accompanying Soviet aid in the construction of chemical enterprises.
- 10. Because East Germany, Poland, and Czechoslovakia combined account for 87 percent of the production of chemicals in the European Satellites and Communist China, moves to coordinate and integrate their production merit the closest attention.

I. Introduction.

The unification of industry in the Soviet Bloc is a development based not only on Communist doctrine but also on recognition of the realities of economic geography. In a 1949 publication of the UN Economic Commission for Europe appeared the following statement:

In Europe the size of the national economies is such that, in most cases, full advantage could be taken of the economies of large-scale production only

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through international specialization in industrial development. 1/*

Communist motivation for the unification of Soviet Bloc industry was clearly stated by Marshal Voroshilov on 26 May 1954 in an address to the Hungarian Workers' Party Congress:

The development of economic collaboration between the Soviet Union and the people's democracies make it possible on the basis of attuned economic plans to make more effective and rational use of the natural wealth and material resources in the common interest, as well as to utilize the experience of socialist construction and technical achievements of the Soviet Union for the successful construction of the foundations of socialism in the people's democracies 2/

Following World War II the USSR acquired political and economic domination over a group of European powers -- East Germany, Czechoslovakia, Poland, Rumania, Hungary, and Bulgaria.** Domination over this bloc of European Satellites gave the USSR virtual control of a large part of the old economic empire of the German Reich. East Germany, Poland, and Czechoslovakia offered particularly good opportunities for the development of an economically significant Satellite chemical industry -- once they could be cut loose from the remaining ties to West Germany and to Western Europe. The period from 1945 to 1955 has been largely one of a reorientation of the chemical economies of the European Satellites away from the former dependence on Germany to the new dependence on the USSR and on the entire Sino-Soviet Bloc.

The countries of the Sino-Soviet Bloc, excluding the USSR, may be divided into three groups according to the characteristics of the development of their chemical industries. The first group -- countries with relatively advanced chemical industries -- consists of East Germany, Czechoslovakia, and Poland. The second group -- countries with relatively retarded chemical industries -- consists of Hungary, Rumania, and Bulgaria. The third group consists of China and North Korea, countries with relatively underdeveloped chemical industries. This third group is an economic entity separate from

^{*} For serially numbered source references, see Appendix E.

** Albania and the Soviet Zone of Austria are not considered in this report.

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the European Satellites, and in this group the pattern of Soviet control is not so highly developed.

Few studies have been made of the relative volume of production of chemicals by individual countries within the Soviet Bloc. A study made by a West German chemical periodical in 1950 indicates that the total production of chemicals by the Satellites was equal to 42 percent of the Soviet production. 3/ The data used for this study, however, were very crude, and the results were subject to a wide range of error. A sampling of 12 major chemical items, with production estimates by country weighted by unit values, is shown in Appendix A of this report. From these estimates indices of relative scale of production have been derived. In 1953 the European Satellites and Communist China combined produced chemicals equal to 79 percent* of Soviet production. The production of the Satellites alone was equal to 74 percent of Soviet production. East Germany, Czechoslovakia, and Poland together accounted for 87 percent of the total production of the European Satellites and Communist China. It is probable that this index overstates the value of Satellite production relative to Soviet production because the index is heavily influenced by the basic chemicals, the sector in which the Satellites as a whole are most highly developed as a result of the postwar expansion. Allowing for this overstatement, Satellite production of chemicals is estimated to be equal to about 70 percent of Soviet production of chemicals.

An examination of Soviet Bloc shipments of chemicals to the USSR reveals that the USSR receives relatively highly processed chemicals from East Germany, Czechoslovakia, and Poland. East Germany is an especially important source of chemicals needed in the Soviet economy. The other European Satellites and Communist China supply a less processed type of material, reflecting the lesser degree of development of their industries. Hungary, however, has a highly developed pharmaceutical industry; Rumania has developed a petrochemical industry; and each Satellite has tended to develop important lines of specialization contributing to the economy of the Soviet Bloc. A listing of shipments of chemicals to the USSR by country does not necessarily indicate the fields of specialization within the individual countries; specialization has been developed highly in terms of inter-Satellite cooperation. Much of the production of Hungary and Rumania, for example, has been diverted to Communist China rather than to the USSR.

^{*} For the derivation of this and the following percentage figures, see Appendix A.

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There is no uniform pattern of Soviet shipments of chemicals to the Satellites. Bulgaria and Rumania are highly dependent on the USSR for a wide range of chemical products, as Communist China would be except for the fact that it has cultivated extensive non-Soviet sources of supply. Because of extensive trade with East Germany, Czechoslovakia, and Rumania, Hungary is less dependent on the USSR. The USSR, however, supplies Hungary with many materials basic to its chemical industry. The chemicals supplied by the USSR to East Germany, Poland, and Czechoslovakia counteract resource deficiencies in those countries and also include a few items which, by their key nature, appear designed to maintain a control function on industrial development.*

In terms of size, the combined chemical industries of the Satellites constitute about 40 percent of the total chemical industry of the Soviet Bloc. The Satellites have resources in capital goods, labor, and raw materials which are of use to the USSR. Efficient use of these resources involves major problems of coordination and administration. Soviet policy on the use of these resources reflects a desire to maximize production in the Soviet Bloc to a degree consistent with over-all Soviet economic and political objectives.

II. Possible Soviet Economic Policies.

In the light of the possible Soviet economic policies applied to the Satellites, some conclusions about actual present Soviet policy may be drawn. Three general categories of policy may be distinguished: exploitation, development of relatively self-supporting economies, and development of an integrated Bloc economy. The policy followed at any given time may actually be a mixture of all three types.

A. Exploitation.

Exploitation, the policy of taking much and giving little, was followed by the USSR immediately after World War II in East Germany and in most of the other European Satellites. The policy involved extensive extraction of reparations from former enemy countries among

^{*} Thus aniline oil is basic in the coal-tar chemical industry (producing dyestuffs, explosives, plastics, and the like). Tetraethyl lead is the most common antiknock compound used in motor and aviation fields (vels.)

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the Satellites, dismantling of East German plants, and extensive draining of Satellite economies by the Soviet-owned corporations -- such as the SAG's (Sowjetische Aktiengesellschaften -- Soviet-owned enterprises) in East Germany -- and the Soviet-Satellite jointly owned corporations. In its full intensity, exploitation was a short-term policy; it either seriously weakened the Satellite economies, leaving the people dangerously dissatisfied, or it created a later drain on the Soviet economy when the USSR attempted to allay the dissatisfaction. Finally, the East-West impasse became such that the short-term advantages of exploitation had to be waived in favor of a new policy developing long-term strength within the Bloc.

B. Development of Self-Supporting Satellite Economies ("Mutual Aid of the People's Democracies").

The development of relatively self-supporting Satellite economies is largely a transitional policy based on the domination of the Bloc economy by the USSR while claiming full observance of individual national sovereignties. In doctrine the Satellites are "People's Economies" in the transitional phase between capitalism and socialism. Under their first long-term plans the Satellites emphasize a buildup of their productive capacities in basic commodities (including basic chemicals). By interlinking long-term trade agreements the Satellites become mutually self-supporting and reduce the drain on the resources of the USSR during their buildup. This policy is largely designed to make the resources of the entire Soviet Bloc available to the USSR during any period of emergency.

C. Integration.

Integration in the economic sense would be characterized by (1) consideration of the Soviet Bloc as an economic whole in matters of economic policy, (2) encouragement of product specialization within the Bloc -- regardless of national boundaries -- designed to provide maximum satisfaction of scheduled requirements considered from a Bloc-wide point of view, and (3) the establishment of Bloc-wide production and distribution planning. This policy would lead ultimately to the economic assimilation of the Satellites by the USSR.

At the present time, the relations within the Soviet Bloc may be characterized as being in the second stage, that of development of relatively self-supporting Satellite economies.* The presence of

^{*} This statement in no way implies absence of Soviet control and direction.

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certain characteristic elements, however, indicates some trend toward integration (the third stage), 4/ and certain other characteristic elements indicate continuing Soviet exploitation (the first stage).

III. Elements of Integration.

Economic integration of the Soviet Bloc is the process of developing component units into one economic unit fundamentally independent of the Free World and subservient to Soviet policy. This economic unit would be characterized by regional specialization of production, by centralized allocation of commodities of Bloc-wide importance, and by centralized direction of basic economic policy. Unification, as used in this report, is a synonym for integration.

A recent report stated the basic elements in this process of integration as follows 5/: (1) use of reparations payments, (2) use of long-term credits, (3) use of joint companies, (4) control through foreign trade, and (5) control through CEMA.

By 1954, reparations payments had lost most of their significance, but historically they had made possible Soviet direction of a large part of the industry of East Germany, Hungary, and Rumania. The USSR stipulated the quality of the reparations (usually to Soviet specifications), established supplies of inputs necessary to insure the continuing flow of these products to the USSR, and established extensive on-the-spot supervision of production. In turn, many items produced as reparations became instrumental in the Soviet-directed buildup of the other Satellites.

Long-term credits continue to play a major role in integration. With these credits the USSR retains a high degree of control over the Satellite economies, in many cases specifying both end uses (as in the construction of designated plants) and the form in which repayment is to be made (as in the case of repayment by delivery of specified goods).

The joint companies have been a complex element of the integration policy. In those cases where the USSR was a joint owner, the companies were a means to Soviet intervention within the economy.* In

^{*} The return of most of the remaining Soviet-Satellite mixed companies in 1954 eliminates a cumbersome Soviet economic system superimposed upon the Satellite economies. The Satellite-Satellite type continues to play an important role in present moves for increased coordination.

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those cases where two separate Satellites are owners, the effect is to encourage regional specialization irrespective of national boundaries.*

Control of foreign trade takes place by coordinated bilateral trade agreements and the supervisory activities of CEMA. The USSR dominates these trade relationships. Long-term agreements have been particularly effective in developing regional specialization within the Soviet Bloc; there is a tendency for these long-term agreements to be incorporated within the long-term economic plans and the annual economic plans in order to make satisfactory allocations of imports within the economy and to assure the smooth flow of exports.

Many studies have touched upon the trade activities of CEMA, but little is known about the full scope of its activities. "The principal function of CEMA is apparently the integration and conduct of orbit planning." 6/ The specific steps toward integration found within the chemical industry will be discussed later in this report, and attention will be called to centralized controls.

IV. Concept of the Single Plan.

Within recent years, the political and economic forces orienting the Satellites toward the USSR have created complex problems in economic planning. Chief among these problems is the need for maximum utilization of resources in order to create maximum strength. This need is particularly noticeable in regard to capital equipment and other materials in short supply. The problem is aggravated by the fact that following the postwar recovery phase the USSR and the Satellites are simultaneously embarking upon ambitious programs of industrialization. The expansion goals are especially ambitious in the chemical industry, which plays a key role in any plans for Blocwide autarky. The chemical industry appears to be a means of circumventing material bottlenecks through the conversion of relatively common materials into the materials in short supply.

Communist planning is detailed and thorough. In the USSR, as trade with the Satellites increased, it became clear that uncontrolled variables in Satellite production and distribution would

^{*} For example, the Hungarian-Rumanian "collaboration" under ROMAGCHIM. See p. 17, below.

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probably become troublesome unless some systematic relationship were developed for simultaneous planning. Soviet planning required assured shipments of requisite commodities from the Satellites, and conversely it was handicapped by uncoordinated demands from them.

The "Single Plan"* has remained in the background during a long period of apparent compromise between Soviet control of the economies of the Satellites and a much-publicized desire to respect their national sovereignties. In 1953, however, official circles within the Satellites began to make some striking pronouncements, and following the introduction of the "new course" the frequency of the pronouncements increased.

In February 1953 a Hungarian broadcast stated that the coordination of the economic plans of the countries belonging to CEMA was of special importance. 7/

On 3 August 1953 the official Hungarian newspaper, Szabad Nep, carried an editorial admitting that in its economic planning Hungary did not rely sufficiently on cooperation with the USSR and with the other countries of the Soviet Bloc and that Hungary's Five Year Plan aimed, in certain respects, at economic isolation and autarky. The editorial concluded that socialist economic planning involves the development not only of the internal economy of the country but also of socialist foreign trade "and the distribution of work among the democratic countries." Reference was then made to the further development of economic cooperation with the "brotherly countries." 8/

Because centralized development of the "Single Plan" requires careful formulation and analysis by competent planners, it is perhaps significant that during the summer of 1953 there appeared to be a turnover of Soviet advisory staffs in industries of Rumania and Hungary. As a result, many experienced personnel returned to Moscow** 9/ and presumably will be available to help formulate the coordinated 1956-60 Five Year Plans.

Addressing the Ninth Plenum of the United Workers' Party Central Committee in October 1953, Premier Bierut of Poland referred to

^{*} The "Single Plan" is the coordination of the key economic policy of the whole Soviet Bloc and includes joint planning, division of labor, and centralized controls (the latter being implicit but not explicit).

** Also see p. 33, below.

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serious disproportions existing in the economy and then associated the "new course" in Poland with developments in the rest of the Soviet Bloc by saying that "all the People's Democracies have laid down as their main economic task in the present period of Socialist building the speeding up of the rise in living standards." <a href="https://living.new.org/living.ne

On 20 January 1954 the Budapest radio and press paid considerable attention to CEMA. It stated that "before the introduction of the new governmental program, excessive industrialization had resulted in a certain economic autarchy. In the future we desire to take advantage to a larger extent of . . . economic cooperation." 11/

In a speech made the same day the Chairman of the Czechoslovak State Planning Office, Josef Pucik, referred to the drawing up of the Second Five Year Plan for 1956-60 and stated that by 1955 only the draft plans for this period would be made because branches of the economy of the majority of the "People's Democracies and the USSR will be coordinated." 12/ The context implies that the coordination would exist subsequent to the formulation of the draft plans in 1955.

On 12 February 1954, the Czechoslovak Minister of Foreign Trade, Dvorak, reviewed economic cooperation among the countries of the Soviet Bloc. He noted the advance of specialization among the countries of the Bloc, the exchange of technical documents, and the preparation of long-term trade agreements. He also made this significant statement:

Whereas before there was at times a tendency in some countries to produce everything with one's own forces and means, the period beginning particularly with the second half of 1953, after certain readjustments had been made in the national-economic plans, is characterised by changes which will lead to further development of this coordinated production. The line of ensuring a more rapid rise in living standards leads in all the countries of people's democracy to a more thorough discussion of the new capital investments and to a more economic utilisation of existing capacities, to the elimination of the tendencies towards unjustified autarchy. 13/

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On 1 March 1954, Premier Georgi Chankov, addressing the Bulgarian Sixth Party Congress, referred to the conclusion of long term trade agreements and to coordination of the plans for Bulgarian industry and agriculture with the plans of "other democratic countries." $\underline{14}/$

In the USSR, meanwhile, Saburov, Chairman of the State Planning Commission, was also making significant comments. In a speech made on 13 March 1954 he referred to the Fifth Five Year Plan as contributing to a further strengthening and extending of economic cooperation between the USSR and "the countries of People's Democracy." 15/

On 30 March 1954, Ulbricht, Premier of East Germany, on behalf of East Germany's SED Party, praised the activity of CEMA, referring to it as a means of placing the economic experience of the USSR directly at the disposal of the other countries of the Soviet Bloc. He stated, "Further extension of the activities of the Council of Mutual Aid is of benefit to the development of the national economy of individual countries and beyond doubt serves to strengthen the world peace camp." In a later passage he referred to the cooperation of CEMA as a factor contributing to the changes in the rates of development of sectors of the East German industry -- that is, the changes termed the "new course." 16/

On 24 May 1954, Rakosi, Party First Secretary, told the Third Party Congress in Hungary that "international division of labor must be realized to a greater extent during the Second Five Year Plan ... among the countries of the Socialist camp. ... /Economic efficiency/must be increased, substantial economies must be achieved in investments which become unnecessary owing to the international division of labor, and serial production must be assured in many fields ... " 17/Despite the fact that 1954 was the last year of the Hungarian First Five Year Plan, 1955 is to be used as a year of preparation, the Second Five Year Plan to extend from 1956 to 1960, in common with all the countries of the Soviet Bloc except Bulgaria.*

Czechoslovakia's Five Year Plan expired in 1953, compelling a longer wait for the initiation of the Second Five Year Plan. On 11 June 1954 the Congress of the Communist Party of Czechoslovakia was informed:

^{*} Bulgaria's industry, a high percentage of which has been constructed under Soviet supervision, may be presumed to be coordinated already.

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"In 1956 our second Five Year Plan will start to operate. Our second Five Year Plan will already be fully synchronized with the economic plans of the USSR and the People's Democracies." 18/ Two days later, Premier Siroky stated that "in the interest of the intensified economic cooperation of the countries of the democratic camp, it will be necessary to speedily compare their economic plans." 19/

These statements, most of which are from official sources in the Soviet Bloc, indicate that this new concept in economic planning -- the concept of the Single Plan for the entire Bloc -- is reaching maturity. Application of the "Single Plan" to many sectors of the economy would represent a remarkably high degree of economic integration. As will be seen below, coordination in the chemical industry has reached such a point that either the entire chemical industry or important sectors of it would be included in coordinated Soviet Bloc planning.

V. Integration of the Chemical Industry.

The elements of the economic integration of the Soviet Bloc are found in abundance within the chemical industries of the countries within the Bloc. Some of these elements are discussed below.

A. Organizational Relationships.

Centralized Bloc control of industry has been and continues to be carried out through a large and interlinked system of organizations with relatively direct responsibilities. In addition, there appears to be an increasing and less obvious coordination of economic policy at the level of the various state planning offices and the Communist Parties of the countries of the Soviet Bloc.

Although it appears feasible for CEMA to exercise a coordinating function in Bloc-wide economic policy and foreign trade, it apparently uses devious and well-concealed means for carrying out its decisions.

In June 1954 the USSR admitted, surprisingly, that a CEMA session which had been held in Moscow that month discussed trade matters and "the further development of a number of branches of industry and agriculture on the basis of economic cooperation between the member countries." 20/

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On the other hand, the Bloc-wide activities of GUSIMZ (Glavnoye Upravleniye Sovetskom Imushchestvom Zagranitsey -- Main Administration for Soviet Property Abroad) have been documented in published intelligence reports. The primary responsibility of this organization was the direction and management of property in foreign countries in which the USSR had a financial interest.* Thus it directed the activities of wholly Soviet-owned companies (such as the SAG's) and of Soviet-Satellite mixed-ownership corporations. It is significant that the activities of these companies, which dominated the Satellite economies, were centrally directed from Moscow by an organization which executed planning, accounting, and operative activities. By its nature, GUSIMZ has been a major testing ground for the development of the skills and techniques of international economic coordination.

The various national Administrations of Soviet Property were under GUSIMZ. 21/ In East Germany, the Administration of Soviet Property in Germany (Upravleniye Sovetskom Imushchestvom v Germanii -- USIG) controlled the operations of the SAG's, the Soviet-owned enterprises. 22/ Similar administrations have existed in the other Satellites containing property of Soviet interest.

The role of the Soviet Ministry of Foreign Trade in the economic assimilation of the Satellites appears to be of major importance. For example, it is the ideal organization to coordinate CEMA work and the operations of GUSIMZ. The ties between CEMA and the Ministry of Foreign Trade are relatively open, as CEMA is openly concerned with trade matters. The Ministry's relations to GUSIMZ were less obvious. GUSIMZ, however, has used the facilities of the Ministry of Foreign Trade, including the offices of the Soviet Trade Representation in the various Satellite capitals. It is also reported that some major GUSIMZ officials were former members of the Ministry of Foreign Trade.

In subsequent pages there will be discussion of a rather highly developed liaison structure within the Satellites for the interchange of industrial data. It seems logical to suppose that a similar liaison structure would exist within the USSR to coordinate planning activities, exchange of personnel, and the necessary exchange of materials on the level of the operating ministries.

^{*} By the end of 1954, GUSIMZ had virtually come to an end.

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Another mechanism for detailed economic planning and supervision of the execution of the plans on an intra-Bloc basis exists in the bilateral Councils of Economic Collaboration. The first such Council* was established in 1947, before CEMA began operation in 1949. This first Council was composed of delegates from Poland and Czechoslovakia and established a permanent joint Council with eight functional commissions. By 1949, some 150 committees and subcommittees were reported to be functioning, with a total membership of over 3,000 persons. In the course of time, the official references to the Council began to stress geographic division of labor as a goal and later made reference to integral planning. A paper read before the Polish Institute of International Affairs in 1949 referred to better utilization of materials and capital equipment in the two countries and to the development of specialization of production. The paper concluded that "owing to the gearing-in of complementary elements in the two economic organs, there is a more rapid increase in economic development and productive forces in the two countries." 23/

Despite some failures and many obstacles, such as mutual distrust and the mutual desire to maintain national control of the most advanced technology, 24/ this original Polish-Czechoslovak Council is still functioning, the original 5-year convention presumably having been renewed. In March 1954 it was officially announced that the sixth Polish-Czechoslovak Commission for Scientific and Technical Matters (a commission of the Council) had met in Warsaw. Czechoslovakia agreed to turn over to Poland "her experience in the field of production" of commodities including chemical and pharmaceutical goods and rubber footwear. Poland was to reciprocate with "her experience" in production of goods including tires and dyes. 25/ Czechoslovakia is now reported to be assisting Poland to build up its power network and to construct the Kedzierzyn Nitrogen Plant. 26/

Polish-Czechoslovak economic cooperation has been moving closer to detailed mutual economic planning in important sectors. One such sector is antibiotics. In June 1954 it was announced that the first session of the commission for economic collaboration between the two countries in the field of the pharmaceutical industry had been held in Warsaw. "Both sides agreed on a plan for exchanging medicines, prescriptions, and experience; for coordinating research work; and for establishing close cooperation in the production of antibiotics." 27/

^{*} The term Council will hereafter be used to refer to a Council of Economic Collaboration. The term CEMA is used to refer to the Council of Economic Mutual Assistance.

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Bilateral arrangements, modeled largely on the pioneer Polish-Czechoslovak Convention, now exist among all the Satellites. The nature of the committees and subcommittees is determined by the particular economic relationships between each pair of countries. CEMA appears to have instigated the formation of the bilateral Councils on a Bloc scale. An article in the official East German economic periodical, <u>Die Wirtschaft</u>, discusses both CEMA and the bilateral Councils in relation to the "common progressive development of the economy of the lands of the People's Democracy." 28/

A relatively recent development has been close Hungarian-Rumanian collaboration in the development of their chemical industries. In late June 1952 the two countries signed a 3-year economic agreement providing for a linking of their electric power networks and for formation of a joint company, ROMAGCHIM, to exploit Rumania's natural gas and chemical resources. 29/ It was further reported that several chemical plants were to be erected on Hungarian soil to utilize Rumanian natural gas (via pipeline) and other Rumanian raw materials. 30/ A Hungarian publication reported that the natural gas from the Transsylvanian area of Rumania was to be used in the catalytic organic chemical industry to produce acetylene and from this, vinyl products (such as polyvinyl chloride). 31/ In 1953 it was reported that in Hungary a new cellulose plant was to be erected which would use straw and wood as raw materials. The wood was to be imported from Rumania, which would then get, as compensation, 40 percent of the cellulose produced. 32/

This trend toward integration of the chemical industries of the two countries continued in 1954. On 8 January it was reported that the fifth session of the Hungarian-Rumanian Scientific and Technology Committee* had been held, at which it was decided that, among other things, Hungary would provide Rumania with documentary material pertaining to the pharmaceutical industry and would assist in research work on the utilization of fuel of low calorie content. 33/ On 17 January 1954 a Rumanian delegation including the Minister of the Chemical Industry, the Chief Deputy of the Minister of Foreign Trade, and the Vice President of the State Planning Commission arrived in Budapest. 34/ On 22 January the Hungarian

^{*} The names of these intercountry organizations for scientific and technical collaboration differ somewhat in form, depending on the individual countries involved.

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press announced the signing of a protocol concerning collaboration of the chemical industries of the two countries. 35/

East Germany has moved much more slowly toward formalized integration with neighboring countries.* Difficulties were encountered, however, in drawing up long-term trade agreements with Czechoslovakia; it was found that the two economies were sufficiently similar to complicate the mutual exchange of goods and "therefore a detailed coordination of their production programs is necessary." During 1952, consultations were planned to coordinate the production of various machine tools and of products of the electrical, precision instrument, optical, and chemical industries. 36/

Poland has been moving toward closer cooperation with Rumania. At the fifth session of the Polish-Rumanian Scientific and Technical Cooperation Committee it was resolved that Poland would give Rumania "benefit of its technical experience" in five industries, including the chemical industry. $\underline{37}/$

Within the mechanism of the bilateral commissions, extensive work in development and integrated planning is being accomplished. The Scientific and Technical Collaboration Committees** appear to be most active, providing a mechanism to supply East German, Polish, and Czechoslovak technology to the rest of the Bloc and to furnish economic assistance from the European Satellites to China and to North Korea. It appears most reasonable to assume that the bilateral Councils and their constituent committees and subcommittees do not operate independently of each other but rather provide a mechanism for the detailed execution of coordinated economic planning within the general policy guidance of CEMA.

East Germany does not appear to be participating in industrial agreements of the scope of those between Poland and Czechoslovakia and between Rumania and Hungary. What could be of great significance to the chemical industry of the European Satellites would be the development of an integrated, regional chemical industry in the East Germany-Poland-Czechoslovakia complex, an area rich in the materials needed by the chemical industry and well-located with reference to

^{*} For recent moves indicating a rapid change in this situation, see Appendix B.

^{**} These are distinct from the parent Councils of Economic Collaboration.

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markets.* It remains to be seem whether or not both the intense hatreds created by the war and the German pride in scientific superiority can be overcome to a degree permitting unified operation of this complex.

In addition to the indirect type of centralized control typified by the bilateral Councils of Economic Collaboration functioning within the framework of CEMA, the direct controls relating to the Soviet ownership of property in the Satellites, and the relatively direct controls created by Soviet aid in the construction of new enterprises, the USSR is a party to Pacts of Friendship and Mutual Aid which enable it to establish further authority over the economic activities of the Satellites.

By way of illustration, the story of the economic relations between Poland and the USSR has been documented in an East German periodical. 38/ A preliminary aid agreement was concluded between the two countries in October 1944. On 21 April 1945 a Pact of Friendship and Mutual Aid was signed, followed by a major economic agreement in July 1945. An agreement signed in April 1946 specified equipment to be supplied to Poland.

An agreement on technical and scientific cooperation in the field of industrial production was signed between Poland and the USSR in March 1947, followed by agreements on 26 January 1948 (for delivery of equipment and materials) and in June 1950 (also for delivery of capital goods).

Beginning in 1948, approximately 50 groups of Soviet specialists came to Poland and gave instruction in plant location, technical design, and the coordination of assembly. In addition, Soviet assembly teams were provided for the new construction. Soviet advice was given in technology; population statistics; types of products; supply of water, power, and raw materials; and matters concerning fuels, transportation, and geology. Such Soviet advice led to the establishment of the Polish industrial production offices, such as the project planning office for the metallurgical industry and the power industry.

Soviet aid was given in the following ways: (1) plans, patents, and licenses were provided; (2) Soviet institutes made analyses of

^{*} As of late 1954 this complex began to take shape. See Appendix B.

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raw materials and performed other tests and experiments; (3) scientific information was exchanged; (4) the USSR supplied catalogs, norms, and other industrial data; and (5) Polish technicians were trained in Soviet plants. The aid to the chemical industry was extensive, most of the plants being erected or reconstructed under the Six Year Plan received Soviet assistance, and it was announced that 75 percent of the capital equipment for the chemical industry was being provided by the USSR.* In return, it was understood that the repayment of Soviet credits and assistance would be in the form of products produced in plants equipped through Soviet aid.

Within the accelerated program for the exchange of scientific and technical information inside the Bloc, there has been a tendency to set up formalized liaison offices as part of the governments of the Satellites. These are the "Offices" of Technical-Scientific Collaboration. Their mission is usually threefold: (1) they prepare the necessary materials for the bilateral Committees of Technical-Scientific Collaboration when those Committees are convened, (2) they provide a mechanism for the necessary follow-up to see that the international decisions are executed within the economy, and (3) they provide a coordinating body relating all the work of the individual bilateral Committees to the over-all needs and capabilities of the individual country. In view of these functions, this type of liaison office has assumed great importance within the movement toward the economic integration of the Soviet Bloc.

In East Germany the liaison office for the exchange of scientific and technical information is the Office for Scientific and Technical Cooperation (Wissenschaftliche-Technische Zusammenarbeit -- WTZ), a Main Department of the Central Office for Research and Technology (Zentralamt fuer Forschung und Technik -- ZAFT) of the State Planning Commission. 39/ The WTZ receives and coordinates requests originating within the Bloc for East German support in research, experimentation, machine construction, and plant construction. It then incorporates these projects, after they have been approved by the pertinent bilateral commission, within the East German system of project control administered by ZAFT. Each project receives both a WTZ number and a ZAFT number, although only the ZAFT number is used in most of the East German paperwork concerning the project. In Rumania,

^{*} This does not mean necessarily that the equipment was actually made in the USSR.

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similar functions are exercised by the Commission of Technical-Scientific Collaboration (Comisia de Colaborare Tecnica-Sientifica -- CTS), $\frac{40}{}$ and such offices appear to be part of a Bloc-wide pattern.

The importance of these offices has been emphasized by the national laws of the various states. The East German law on the Five Year Plan stated the fifth main task of the Plan as follows: "The scientific-technical cooperation with the USSR and the countries of the people's democracy is to be promoted in every way and to be extended to all fields of science, technique, and economy." 41/ A resolution of the Polish Government Presidium on 30 May 1953 pertained to the "deepening of the collaboration of the agencies of economic administration with the scientific-technical association allied in the Supreme Technical Organization," a ponderous way of saying that Polish government officials were to cooperate with the program for the exchange of scientific and technical aid. 42/

B. Intra-Bloc Trade Relationships.

Intra-Bloc trade in chemicals occurs as (1) commercial exports under contractual agreement, (2) reparations shipments, and (3) "repayment in kind."

In Communist planning, imports are an important component of the total available supply of any given item. Because distribution planning depends upon a correct assessment of the total available supply, motivation to "regularize" imports is strong. This motivation is matched by a corresponding one to regularize exports in order to insure prompt fulfillment of contracts and to relate export volume to the capabilities of the country.

The method used to solve these problems has been that of establishing bilateral long-term trade agreements setting down the trade volume for specified key products.* In theory, both importing and exporting countries would have some assurance of the long-term nature of trade flows; the necessary capital investment could be undertaken to secure the proper supply of exports; and importing countries would be able to plan on the basis of an assured supply of essential items. In actual operation, however, the detailed annual trade plans have retained their original importance, and the operation of the long-term plans has been hampered by inflexibility in the

^{*} This is an area in which CEMA has functioned relatively openly as coordinator.

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face of a changing international situation. Supplementary long-term agreements have attempted to remedy this problem but with uncertain success.

An illustration of this is the entering of East Germany into long-term trade agreements with the other countries of the Soviet Bloc, the most important agreement being the one with the USSR signed on 27 September 1951 and covering the years 1952 through 1955. The East German Five Year Plan, which was announced 1 November 1951, incorporated this very important long-term trade agreement.

At the present time, reparations shipments have officially dropped out of the trade scene. A primary advantage of these shipments was that they held a priority over all commercial export shipments. This priority advantage can be retained for Soviet benefit by use of so-called "Friendship" shipments in "gratitude" to the USSR and by the use of repayment-in-kind shipments in settlement of Soviet credits of various types. The repayment-in-kind shipments also retain a high degree of Soviet control -- from the initial specification of the commodities desired to the final shipment.

The so-called repayment-in-kind shipment possesses characteristics of both the reparations shipment and the normal export shipment. It is like a normal export in the sense that it is recompensed, at least nominally, by Soviet services or shipment of goods -- indeed, repayment-in-kind shipments are usually included in the over-all export plan, although under certain conditions they may not be. On the other hand, there appear to be some important differences from the ordinary export. These differences definitely exist in East Germany and probably exist in the other Satellites. The primary difference consists of a high degree of preferential treatment. The shipments assume a priority ahead of other exports at virtually all levels of handling. In East Germany the USSR exercises a high degree of direct control over these shipments, preempting specific commodities for the specific requirements of its operating ministries.

An authoritative East German source describes these repayment-in-kind shipments, known in Germany as "Konto T," by stating that the goods produced in SAG plants under the Konto T account were intended for specific Soviet ministries, whereas goods produced for regular deliveries went to the usual Soviet importing agencies to be resold to customers in the USSR. Also, such deliveries were reported to be based on the "writing-off of mutual debts." 43/

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The impact of the Konto T shipments on the East German economy has been strong. In March 1953 there were extensive discussions between East German chemical export officials and the State Administration for Material Supply about this impact. The state chemical import-export firm, DIA Chemie, enclosed a list of 17 commodities which it found most difficult to export in the quantities planned because of the diversion of these commodities to Konto T deliveries. The industry was unable to produce additional quantities of chemicals to replace the diverted amounts. In many cases, East Germany would be unable to fulfill export contract obligations. The solution proposed, apparently as a sole alternative, was a downward revision of the chemical export plan (except for Konto T shipments). 44/*

The East German Konto T shipments appear to have originated in SAG plants. It is probable that in part they have represented payment of rental and profits to the USSR from the operations of these plants. Such shipments could also be in repayment of Soviet long-term credits covering capital investment; such credits amounted to 586 million Deutsche Mark for 7 of the chemical plants returned to German control on 1 January 1954. It is probable that the USSR has required payment for assets and repayment of outstanding credits extended to the more than 200 former Soviet-owned plants of all types; the Konto T shipment would be a convenient form of payment and would permit continuing control of the East German economy. In that case, 7 of the chemical plants returned on 1 January 1954 alone would give rise to Soviet claims of more than 1.4 billion Deutsche Mark, 586 million for the long-term credits and 839 million for the property value of the plants. 45/ By way of comparison, planned East German exports of chemicals to the USSR in 1953 amounted to 224 million rubles (approximately 186 million Deutsche Mark). 46/

There is evidence suggesting that there exist in the other Satellites similar preferential arrangements for the repayment in goods of Soviet credits. One source reports a secret protocol signed in Moscow by the USSR and Hungary on 9 December 1947 giving Sovietowned and Soviet-Hungarian companies the "right" to transfer profits and dividends to the USSR in the form of goods. 47/

An official East German periodical, referring to the extensive Soviet credits granted to Poland, notes: "The dates for repayment

^{*} A similar revision occurred in 1954, indicating a continuation of Konto T shipments in 1954.

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have been so set that repayment will be in the form of products produced in plants equipped with capital goods furnished by the Soviet Union." The same article states that 75 percent of Poland's chemical capital equipment is provided by the USSR. 48/

In general, trade is a fertile area for indications of the emergence of a Bloc-wide unified economic policy. Intra-Bloc trading relationships, in terms of the chemical industry, are characterized by predominant Soviet control of shipments and by the evolution of Bloc-wide coordinating mechanisms.

Soviet trading companies have gained control of a volume of chemical commodities much greater than that required for Soviet consumption. There are many reasons for this, the most important of which is the Soviet domination of East Germany, the leading exporter of chemicals among the Satellites. As a result, the USSR is in the position of middleman, directing extensive shipments from producing country to consuming country. This position permits the USSR to exercise a major influence on industrial development in the countries concerned. In addition, in the case of several commodities -- ethyl fluid, for example -- the USSR is the major Bloc source of supply. This again permits direct Soviet control of the flow of the commodity.

In addition to those trade relationships in which it ϵx -ercises relatively direct control, the USSR also dominates CEMA, which functions as a general coordinator in the preparation of intra-Bloc trade agreements.

An important development in the area of trade relations may have been the multinational trade negotiation allocating key resources to the member countries of the Bloc. Such negotiations may have taken place concerning rubber. Significantly, the Chairman of the Rubber Trade Association of London observed that Soviet rubber purchases from Great Britain had declined in 1953 and that it was clear that internal arrangements existed whereby imports were divided among the countries of the Soviet Bloc. 49/ It is probable that he had in mind the extensive shipments of rubber to Communist China, shipments which are much above the level of Chinese Communist requirements.

This type of negotiation would differ little from the normal Soviet negotiations preparatory to the signing of a trade agreement.

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It would be a logical development in relation to those products which are provided to the European Satellites through the USSR. A more important development would be allocation conferences for products supplied primarily by the Satellites themselves. Even this level of allocation is virtually achieved through Soviet control of the most important items of Satellite production -- East German Buna S synthetic rubber, for example.

Throughout the whole interlinked structure of centralized production control, there exists a strong potential for coordinated sales effort, especially in relation to Western markets. Specialization within the chemical industry of the Soviet Bloc is such that for the great bulk of the items only one or two countries have an export surplus, and in such cases it is difficult to detect evidences of concerted sales action.

In July 1954, while Western COCOM discussions were being held in Paris, a meeting of CEMA was held in Moscow which discussed, among other things, questions bearing on the development of foreign trade between member countries and other lands. 50/

C. Expansion of the Chemical Industries of the Satellites.

The patterns of industrial expansion provide a valuable area for the assessment of the impact of Bloc-wide planning. In terms of the chemical industry, several forces can be seen at work determining the direction of this expansion: (1) a drive for Bloc-wide independence from Western sources in basic industrial chemicals, (2) development of specialized production in those countries which have a supply of heavy chemicals large enough to support the general industrialization program or which have special resources or skills to support such specialization, and (3) emergence of rudimentary international planning* for maximum utilization of resources.

The European Satellites and Communist China have emphasized installation of heavy chemical plants. In recent years, all or most of the Satellites have installed plants for the production of sulfuric acid, caustic soda, antibiotics, synthetic fibers, nitrogen and allied products, plastics, coal-tar chemicals, and synthetic fertilizers.

^{*} A leading example is ROMAGCHIM, a joint Rumanian-Hungarian chemical development.

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Patterns of specialization are revealed to a certain extent by the exports from a particular country. East German exports are largely (1) items reflecting a relatively high degree of technology; (2) chemical ores and derivatives from chemical ores (potash, salt, and the like); and (3) basic industrial chemicals in short supply elsewhere in the Bloc. Polish chemical exports include (1) products based on Polish coal; (2) products based on special resources, such as zinc (derivatives include zinc chloride and zinc white); and (3) basic industrial chemicals in short supply elsewhere in the Bloc. Czechoslovakia exports some coal-tar chemicals; some specialty products (such as titanium white); tires; cellulose; and many products reflecting relatively advanced technology (catalysts, laboratory chemicals, and pyrocatechol). Hungary has become relatively specialized in some lines of dyestuffs and dye intermediates, in many pharmaceutical items, and in the production of sera and vaccines. Rumanian specialties are based largely on the petroleum industry and include petrochemicals, carbon black, and industrial chemicals consumed in the petroleum industry (such as sulfuric acid and caustic soda).

In addition to the general buildup in basic capacity, recent expansion has tended to encourage this specialization where it represents a net improvement of the Bloc supply position. By the admission of prominent Bloc spokesmen, nevertheless, this movement toward national specialization has barely begun.*

The size of the expansion of the chemical industries in the Satellites is highly significant; the capital invested, being for the greater part Soviet-controlled, could have been invested in an expansion of the Soviet chemical industry. As can be seen, the Satellite expansion goes far beyond mere recovery of the prewar level of production. In East Germany the production of chemicals planned for 1955 is to be more than three times the scale of 1936 production.**
In Czechoslovakia,1953 production of chemicals was more than three

^{*} See pp. 11-13, above.

^{**} This statement is based on Ulbricht's claim that planned 1955 chemical production of 6.6 billion DM would be 304 percent of 1936. The 1955 target was later increased to 8.2 billion DM. 51/

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times 1937 production.* Poland's 1955 target for production of chemicals is an index of 800 percent of 1938 production; this target, however, is inflated by Poland's postwar boundary changes. 53/ Although allowance should be made for statistical inflation in all of these official figures, they do indicate the order of magnitude.

A high degree of Soviet control went with the Soviet investments. Direct investment in Soviet-owned or Soviet-Satellite companies was accompanied by direct Soviet control. Soviet "assistance" in the construction or reconstruction of Satellite plants was accompanied by Soviet planning, participation of Soviet "experts," and Soviet preferential call upon the production of the plants.**

Soviet control is somewhat less obvious when a capital investment is undertaken jointly by two Satellites. Within the framework of the bilateral Councils of Economic Collaboration operating within the Molotov Plan,*** the individual Satellites have established liaison offices which coordinate the various tasks involved in joint capital-investment activities.**** East Germany has gone a step beyond this by establishing Commissions for Economic Cooperation in the power, metallurgical, and chemical industries. The Commissions, composed of representatives of the industry, the State Planning Commission, the Ministry of Trade, and the Central Office for Research and Technology, are responsible for the control of the preparation of equipment for other members of the Bloc. 54/

At first glance, such joint Satellite activities do not appear to represent a centrally controlled activity, but there are both logical and empirical grounds for further examination. Do the Satellites themselves determine the policies concerning the joint activities, or do they merely implement in detail the policy decisions of some central body such as CEMA? Logically, noncoordinated joint

^{*} An index for 1953 of 370 (1937 = 100) was derived from the announcement that 1953 production was almost 2 1/2 times 1948 and 1948 production was 124 percent of 1937. 52/

^{**} An outstanding case history has been the story of the construction of the Dimitrovgrad Nitrogen Plant in Bulgaria, a plant erected with Soviet "help" and now operating under what seems to be a high degree of Soviet control. For discussion of the topic of preferential call upon production, see p. 22, above.

^{***} This is the policy plan establishing CEMA.

^{****} See p. 20, above.

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investment activities would cause a state of chaos unless the necessary resources of labor, materials, and capital itself were relatively abundant, which they are not within the Bloc. Such lack of coordination would lead to what the Satellite radio calls "unjustified autarchy." Whether or not rudimentary coordination has existed in past years, the recent Satellite denunciations of "autarchy" indicate dissatisfaction with the results. Indeed, the Soviet Bloc is actively considering a far-reaching form of integration.

D. <u>Direct Soviet Controls</u>.

The major elements of Soviet control have been discussed earlier in this report.* Direct Soviet controls of trade and industrial expansion have also been discussed.**

A point not previously made in this report merits mention here -- the existence of historical precedents for the preparation of Satellite industrial plans on the basis of Soviet appraisement. The occupation of East Germany permitted a high degree of Soviet control at the central planning levels of that country. To some extent, however, East Germany is a special case. More generally, there is a widespread feeling that the revisions of the Satellite long-term plans occurring in 1950 and 1951 reflected some direct Soviet interference at the planning level and certainly a great deal of indirect Soviet manipulation.

It is not common to find official statements resembling an admission of Soviet participation in industrial planning within the Satellites. Thus a statement made by Ruminski, the Polish Minister of the Chemical Industry, is unusual 55/: "The plan, prepared at the beginning of 1951 on the basis of Soviet appraisement, for the rapid transformation of sulfuric acid factories gave basic directives" Poland's laggard sulfuric acid industry gave continuing trouble, and, in 1952, one of the leading Soviet sulfuric acid experts, Malin, attended a conference in Warsaw. 56/ There was not, however, any apparent beneficial result to sulfuric acid production.

E. Other Evidences of Integration.

Although most aspects of the trend toward economic centralism are disguised as the voluntary mutual assistance of free

^{*} See p. 9, above. ** See pp. 21 and 25, above.

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and sovereign nations moving toward a glorious common future, the effect is to place in Moscow the responsibility for an increasing number of economic decisions for the whole Soviet Bloc.

Striking illustrations of this are found in three areas:
(1) the "voluntary" exchange of information about production capacity;
(2) the "voluntary" exchange of scientific and technical personnel; and
(3) the "voluntary" adoption of Soviet industrial specifications (GOST standards).

If extensive economic integration of the Soviet Bloc were already realized, the dominant flows of information would be from the appropriate producing units through channels within their own governments to the Bloc planning authority, with control and policy guidance moving in the opposite direction.

The Soviet Bloc has apparently reached the point at which general economic policy can be centrally determined but where many important aspects of the detailed implementation of that policy must be executed on the initiative of the governments of the member countries. The major significance of this is that the control mechanism for the enforcement of policy decisions is crude and cumbersome and rests on the fact of Soviet domination rather than on an efficient administrative system.

Probably because of a Soviet reluctance to abandon the pretense of equal sovereignty of the countries of the Soviet Bloc, the exchange of information still has many aspects of informality and spontaneity.

There are official indications that a more formal exchange of information will be conducted, particularly for preparation of economic plans. In May 1954, Marshal Voroshilov referred to increased Soviet Bloc division of labor on the basis of "attuned economic plans." In June 1954 the Moscow radio reported a meeting of CEMA which discussed "the further development of a number of branches of industry and agriculture on the basis of economic cooperation." 57/

The exchange of technical and scientific personnel within the Soviet Bloc serves two major purposes: (1) the training of personnel in operations and procedures standardized on an international or a Bloc-wide scale and (2) the development of cadres of Soviet personnel intimately familiar with technical and industrial conditions within

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the Satellites. Such operations have been taking place on an augmented scale and have become commonplace.*

To a large extent the international adoption of uniform compulsory industrial specifications implies a loss of sovereignty to the participating countries. This is true in the Soviet Eloc, for in those countries industrial specifications have the force of law. The purpose of industrial standardization** is to restrict diversity in the interest of economic efficiency. It is for that purpose (with the addition of an implied recognition of Soviet economic assimilation of its Satellites) that the Bloc is moving steadily toward the adoption of a common set of industrial specifications. As this trend continues, it will facilitate centralized industrial planning, and, furthermore, it will decrease the logistic problems of a Bloc-wide mobilization.

The pattern which is developing is one of "maximum use" of Soviet industrial specifications within the Satellite economies. This involves the outright adoption of Soviet specifications where feasible and a maximum effort to reconcile Soviet and Satellite specifications where differences in raw materials or industrial environment preclude outright adoption of Soviet specifications.

The task is simplest in those countries which have received much of their equipment and technical knowledge from the USSR since World War II and is most complicated in those countries which were highly industrialized before becoming Satellites. The latter group of countries -- East Germany, Poland, and Czechoslovakia -- possess their own relatively advanced systems of industrial specifications.

^{**} See pp. 19 and 20, above.

** Definition of standardization: "Standardization includes the establishment of norms (specifications) which unequivocally specify approved shapes, dimensions, properties, tests, definitions, nomenclature, classifications, and principles for the receipt and storage of raw and process materials, and semifinished and finished products. In the field of production and technology, standardization leads to concentration upon the minimum adequate number of sizes, types, and grades of products, to rigid specifications for such products, and to uniform manufacturing methods." 58/

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Conversion to Soviet specifications involves both substantial initial capital outlays and potential loss of export markets. On the other hand, continuation of independent systems of industrial specifications causes duplication of facilities, hinders interchangeability of parts, and thwarts the introduction of Soviet labor and material norms.*

In recent years there has been strong evidence of a concentrated effort to introduce Soviet specifications into the economies of Poland, East Germany, and Czechoslovakia. In 1951, both the Polish Committee on Standardization and the Czechoslovak Office of Standardization were instructed by their respective state planning offices to work out methods for the introduction of Soviet standards. 59/ In an East German publication the same year, it was stated that "in certain cases /the Popular Democracies/ unite for the 'typing' of production."

By mid-1953, Czechoslovakia was prepared to initiate the actual changeover. 61/ The country was already producing such a volume of export orders to Soviet specifications that the initial cost of the changeover would not be prohibitive, and a detailed timetable for the adoption of Soviet specifications was prepared. This timetable called for substantial completion of the task by 1956, the year subsequently announced as being the first year of Czechoslovakia's new "coordinated" (with the rest of the Soviet Bloc) Five Year Plan. As previously observed, the adoption of Soviet standards is not expected to be rigid but rather to be flexible, adjusted to the circumstances of the country. As a result, the Czechoslovak CSN (Czechoslovak State Norm) system of standards will continue to exist -- but with a minimum of deviation from corresponding Soviet standards.

East Germany, probably disturbed by the steady Soviet assimilation of former German markets in Eastern Europe and jealous of its heritage of scientific and industrial prowess, appears to be resisting adoption of Soviet standards. On 1 August 1953, East Germany approved formation of an Office of Standardization, including on its limited staff a "Chief Expert for Cooperation with the Soviet Union and the People's Democracies." 62/ It has been rumored that the

^{*} The introduction of Soviet norms applied to the expenditure of resources is potentially a great weapon of detailed centralized Soviet control of the entire Bloc.

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Office will have the task of prodding East German industry into acceptance of Soviet specifications, but as yet there is no evidence that the Office has begun operations.*

The large-scale adoption of Soviet standards by the Satellite economies will make plain to the Satellite industrial technicians the degree of Soviet control. It is thus a potential crisis point in the imposition of detailed Soviet economic control upon the Soviet Bloc.

VI. Obstacles and Limitations to the Degree of Unification.

The degree of centralization of economic policy within the chemical industry of the Soviet Bloc is limited by a series of political and economic factors:

- 1. Within the USSR and its Satellites, Party rule has insured the subordination of economic activity to the policy decisions of the Party. A movement such as that toward Bloc economic unification will reflect considerations not only of economic efficiency but also of political expediency. It may thus be reversed with short notice.
- 2. Soviet policy toward the Satellites has long been beset by contortions reflecting battles between opposing points of view. Those officials who expect a long-term division between East and West with a comparatively limited exchange of goods tend to support economic unification within the Soviet Bloc. They are supported by colleagues who think that there might be a larger exchange of goods between East and West but still think that the Soviet Bloc should be basically self-sufficient in the long run. Some other officials, for a variety of reasons, favor relatively outright economic exploitation of the Satellites. These include those who distrust "foreign" influences emanating from the Satellites. Others may contemplate a relatively fluid foreign policy regarding the Satellites, in contrast to a high degree of assimilation. Others may be relatively isolationist in outlook, favoring economic consolidation within the boundaries of the USSR.

^{*} In early 1955 this program began operation. It is still too early to assess the results or the possible impact of planning for 1956-60.

- 3. Economic unification will force the crisis with nationalistic elements within the Satellites. Because its very justification is maximization of production, unification requires the support of administrators and technicians in addition to Party members. Yet those same administrators and technicians are often those who have the most to lose from the digestion of their countries by the USSR. The problem will be most complex in East Germany and, to a lesser degree, in Poland and Czechoslovakia.
- 4. The necessity for "respecting" national sovereignty vastly complicates economic unification. It requires devious and overlapping channels for centralized control, including some direct Soviet controls; extensive control through the international Communist Party apparatus; controls by the respective Satellite state planning offices; and controls by the CEMA mechanism for the "voluntary" cooperation of "sovereign" states. The coordination of this structure of direct, indirect, open, and secret controls must be confusing even to a Soviet bureaucrat.
- 5. Unification requires not only the central determination of general economic policy but a system of controls over the execution of that policy. This requires trained planners, administrators, technicians, and statisticians familiar not only with their respective professions but also with the environment of the particular Satellite states with which they are concerned. The widespread use of Soviet "specialists" in the Satellites has gradually expanded the number of personnel with suitable background. The need for such personnel both within the USSR and in the Satellites is so great, however, that their comparatively small number will continue to be a limiting factor.
- 6. The monetary problem is linked with the problem of individual sovereignties within the Soviet Bloc. Diverse exchange rates, fluctuating with respect to each other, create complicated problems for price policy. Some experts believe that efficient utilization of resources within an area requires a single market price applying within that area for the same commodity and that discrimination in pricing works against economic efficiency. Within the Bloc it is still comparatively common to find price discrimination among the member countries. Most notable is the typical Soviet insistence on prices favorable to the USSR. "Buy cheap and sell dear" has not been abandoned as a tenet of Soviet economic policy.

- 7. The USSR is placed in a dilemma when it is faced with the need of exchanging economic data with other nations, even those controlled by itself. The USSR has a deep mistrust of releasing detailed economic information outside of its own borders. On the other hand, Soviet control of the Satellites requires that a constant stream of Satellite economic data flow into the USSR. When this flow of information becomes too obviously unilateral, the USSR is placed in a difficult position -- especially because of the pretext of mutual and equal sovereignty.
- 8. Economic unification of a region implies the relatively free movement of resources within that region. In turn, this free movement implies a reasonably adequate transport net. Within the USSR, transport deficiencies encouraged a drive toward regional self-sufficiency. Within the European Satellites, similarly, transport problems may encourage regional industrial development. Ultimate policy control, however, would continue to come from Moscow.
- 9. International division of labor implies that productive resources will be developed regardless of nationality. While the USSR has conducted a surprising amount of industrial development outside of its own borders, it still seems true that in the most important cases the USSR is given preference. It is unlikely that this will change in the near future.
- 10. It is probable that enough overtones of exploitation will remain in future economic policy to make the USSR vulnerable to Western propaganda. Any clash between Soviet-oriented and nationalistic-oriented officials in Satellite states would increase this vulnerability.

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APPENDIX A

PRODUCTION INDEX

A production index based on 1953 production by the countries of the Soviet Bloc of 12 representative chemical products is developed in the accompanying table.*

Total production by the Satellites and Communist China of the items included in the index, equal to 79 percent of Soviet production, is 44 percent of the total production of the Sino-Soviet Bloc. The three major producers of the index item -- East Germany, Poland, and Czechoslovakia -- accounted for 92 percent of the Satellite total (excluding Communist China).

It should be noted that the index is weighted in favor of heavy chemicals and rubber. It thus tends to understate the value of Czechoslovak production, which runs to chemical processing and specialty items, and of Hungarian production, in which pharmaceuticals are very important.

Using the weighted value totals of the index, the following rank order is obtained:

USSR	4,939,111
East Germany	2,147,522
Poland	777,421
Czechoslovakia	471,535
Communist China	248,150
Rumania	113,098
Hungary	105,323
Bulgaria	60 , 589

^{*} The table follows on p. 37.

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APPENDIX B

STRENGTHENED COOPERATION AMONG THE CHEMICAL INDUSTRIES OF EAST GERMANY, CZECHOSLOVAKIA, AND POLAND 1954

In August 1954, development of an integrated East German-Polish-Czechoslovak regional complex for the chemical industry began to take shape. As early as 1952, preliminary coordination of the East German and Czechoslovak chemical industries was begun.*

The two major agreements necessary to complete the triangle were apparently signed in Warsaw in the last week of July 1954, when Polish-Czechoslovak and Polish-East German protocols for cooperation in the chemical industry were signed.

The first of the two announcements stated that the first session of the Government Commission for Economic Cooperation between the Polish People's Republic and the Czechoslovak Republic in the chemical industry had been held in Warsaw. During the session, decisions had been passed which would contribute to the development of the chemical industry in both countries and would constitute a further step in the consolidation of economic cooperation. 64/

The second announcement mentioned the signing of a protocol further strengthening economic cooperation between Poland and East Germany in the field of the chemical industry. 65/

It is possible that the coordination envisaged in these protocols includes coordination of production, as was announced in June 1954, for a Polish-Czechoslovak agreement in the pharmaceutical industry. 66/

^{*} See p. 18, above.

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APPENDIX C

METHODOLOGY

No methodological problems were encountered except in the preparation of Appendix A, which compares the Soviet Bloc production of 12 major chemical items. CIA production estimates for 1953 were used. Sources and work sheets are available in the Branch responsible for this report. Soviet domestic prices for 1950, in rubles, were utilized as the weights. It is believed that the items used in the index create a bias in favor of heavy chemical production. The figures cannot, therefore, be employed with full confidence as representative of the over-all chemical industry, which includes such component sectors as pharmaceuticals, plastics, rubber processing, and chemical specialty items, as well as heavy chemicals. Derivation of an index representative of the over-all industry must await ORR estimates of Bloc-wide production of a larger range of products.

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APPENDIX D

GAPS IN INTELLIGENCE

Although this report has placed its emphasis upon coordination at the level of the chemical industry, the materials surveyed have raised questions concerning over-all interindustry coordination within the Soviet Bloc. Apart from these unanswered questions, which are beyond the scope of this report, notable gaps exist relative to the central problems of the report.

In some cases the absence of evidence is of the nature that signifies either an intelligence gap or the nonexistence of a suspected or surmised activity, organization, or relationship.

Of this nature is the lack of information concerning report flows between the USSR and the Satellites. The conclusions of the report do not postulate the existence of such flows on a comprehensive basis; yet information as to their existence would be highly significant.

Other gaps concern phenomena so recent that present information is sketchy. The possible financial settlements arising from the transfer of the last remaining Soviet-owned corporations in East Germany to the central government are not clearly established. There is no information on the actual implementation of the protocols among Poland, Czechoslovakia, and East Germany concerning the chemical industry. This subject deserves concentrated continuing coverage.

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APPENDIX E

SOURCE REFERENCES

A report of this nature does not deal with much that is measurable: it is qualitative rather than quantitative. Certain facts can be established, however, such as the existence of organizations and certain functions performed by them. Gradually, patterns of behavior and of relationships begin to appear. To establish such patterns, the individual facts or observations which are their bases must be authoritative. Official sources, therefore, have been used as much as possible. Particularly valuable in supplying this information have been publications, covert intelligence, and Soviet Bloc periodicals and publications. The State Department economic reports from the Satellite capitals have been invaluable in providing current coverage and in calling attention to possible significant developments. In many cases, field guidance also has been fruitful.

Evaluations, following the classification entry and designated "Eval.," have the following significance:

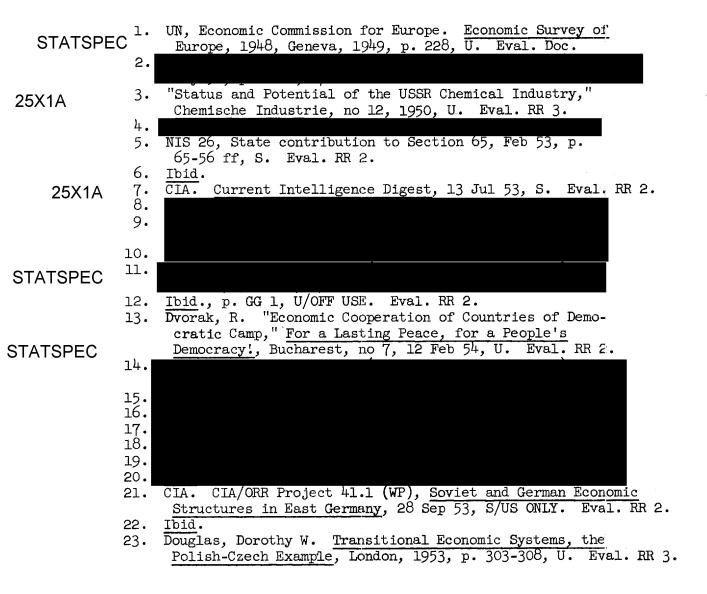
Source of Information Doc. - Documentary A - Completely reliable B - Usually reliable C - Fairly reliable D - Not usually reliable E - Not reliable F - Cannot be judged Information 1 - Confirmed by other sources 2 - Probably true 4 - Doubtful 5 - Probably false 6 - Cannot be judged

"Documentary" refers to original documents of foreign governments and organizations; copies or translations of such documents by a staff officer; or information extracted from such documents by a staff officer, all of which may carry the field evaluation "Documentary."

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Evaluations not otherwise designated are those appearing on the cited document; those designated "RR" are by the author of this report. No "RR" evaluation is given when the author agrees with the evaluation on the cited document.



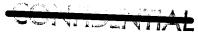
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